

REMARKS

In the Office Action, the Examiner rejected Claims 1-11, 13, 15, 16 and 19-24, which were all of the then pending claim, under 35 U.S.C. §103 as being unpatentable over the prior art. Claims 1, 2, 5, 7, 8, 11, 13 and 19-24 were also rejected under 35 U.S.C. §101 as directed to non-statutory subject matter.

With respect to the rejection of the claims under 35 U.S.C. §103, Claims 1, 2, 5, 7, 8, 11, 13 and 19-24 were rejected as being unpatentable over U.S. Patent 5,351,302 (Leighton, et al.) in view of U.S. Patent 5,902,652 (Mital). Claims 3, 4, 9, 10, 15 and 17 were rejected as being unpatentable over Leighton and Mital and further in view of U.S. Patent 5,850,442 (Muftic), and Claim 6 was rejected as being unpatentable over Leighton, Mital and further in view of U.S. Patent 6,185,678 (Arbaugh, et al.).

It is noted that the previous rejection of the claims based on U.S. Patent application publication no. 2002/0128940(Orrin, et al.), was withdrawn.

Independent Claims 1, 7 and 13 are being amended to better define the subject matters of these claims. Claims 8-11 are being amended to keep the language of these claims consistent with the language of amended Claim 7, and Claims 15 and 16 are being amended to keep the language of these claims consistent with the language of Claim 13. Claims 21 and 23 are being amended to remove features described in these claims, and Claim 24 is being cancelled to reduce the number of pending issues. Claim 25, which is dependent from Claim 1, is being added to describe a feature of an embodiment of the invention.

It is believed that the amendments being made herein fully address the rejection of Claims 1, 2, 5, 7, 8, 11, 13 and 19-23 under 35 U.S.C. §101. In particular, Claim 1, which is directed to a method of managing the transfer of financial instruments, is being amended to

indicate that the method is a processor implemented method. Claim 7 is directed to a system for managing the transfer of financial instruments, and this claim is being amended to indicate that this system includes one or more processor units configured for performing the functions set forth in the claim. Claim 13 defines a program storage device including a program of instructions, and this claim is being amended to indicate that these instructions, when executed in one or more processor units, cause the one or more processor units to perform the steps described in the claim.

As now amended, each of the independent Claims 1, 7 and 13 positively sets forth apparatus – a processor unit or one or more processor units. Thus, these claims, and the dependent Claims 2-5, 8, 11 and 19-23, are now tied to another statutory class – an apparatus – and also transform underlying subject matter – one or more processor units – to a different state or thing. Accordingly, Claims 1, 2, 5, 7, 8, 11, 13 and 19-23 are now directed to statutory subject matter within the meaning of 35 U.S.C. §101. The Examiner is thus asked to reconsider and to withdraw the rejection of Claims 1, 2, 5, 7, 8, 11, 13 and 19-23 under 35 U.S.C. §101.

Furthermore, claims 1-11, 13, 15, 16 and 19-23 and 25, which are now all of the pending claims, patentably distinguish over the prior art and are allowable. The Examiner is thus asked to reconsider and to withdraw the rejections of claims 1-11, 13, 15, 16 and 19-23 under 35 U.S.C. §103, and to allow these claims and new Claim 25.

Generally, Claims 1-11, 13, 15, 16 and 19-23 and 25 patentably distinguish over the prior art because the prior art does not shown or render obvious the feature, in a process of transferring a title from a first party owner to a second party transferee, as described in the independent Claims 1, 7 and 13, that the owner of the title, produces a message including the

public part of the signature key of the transferee, and the owner signs that message using a secret key of a signature scheme of the owner.

The present invention generally relates to establishing and to managing electronic titles for financial instruments. In order to develop a suitable mechanism to do this, a number of issues need to be addressed. For instance, it is necessary, or highly desirable, to prevent the creation of illegitimate titles and to prevent fraudulent sales. Also, the ability to transfer ownership of the title should not be unduly impeded, and the ability to maintain confidentiality and to preserve anonymity may also be important.

The present invention effectively addresses these issues. Generally, this is done through a unique involvement of three parties – the owner, the transferee (such as a buyer), and a third party emitter. With the preferred embodiment of the present invention, the third party emitter issues the title for the financial instrument; and the title includes (i) a message describing the title and how to contact the owner, and (ii) a digital signature of the emitter.

When the owner wants to transfer the title to another person, the owner, adds a public part of a signature scheme of the transferee to the title to produce an expanded title. The owner also produces a message including the public part of the signature scheme of the transferee, and the owner signs this message using a secret key of a signature scheme of the owner. In one embodiment of the invention, the third party emitter signs this expanded title.

The references of record do not disclose or suggest, in the context of digitally managing the transfer of financial instruments between an owner, a transferee, and a third party emitter, the feature of the owner producing a message including the public part of the signature scheme of the transferee, and the owner signing this message using a secret key of a signature scheme of the owner.

For instance, Leighton, et al. discloses a system for preventing counterfeiting or otherwise illegal use of documents. In this system, a title is provided with an identifier uniquely associated with the personal or real property that is the subject of the title, and information directly or indirectly identifying the owner of the property. As discussed in column 3, lines 31-44, an insurance company or other suitable authority produces a digital signature of a bit stream on a card 10 to help secure a vehicle title.

In the Office Action, the Examiner argued that Leighton, et al. discloses, in column 2, lines 51-68, the owner appending to the title a public part of a signature scheme of another person. This portion of Leighton, et al. discusses digital signatures and public-key cryptosystems, and how a digital signature can be used to bind information to a title. There is no disclosure in this portion of Leighton, et al. of having the owner produce and sign the above-discussed message that is used in the present invention – that is, having the owner produce a message including the public part of the signature scheme of the transferee, and the owner signing this message using a secret key of a signature scheme of the owner.

Mital discloses an e-commerce transaction system. In this system, various people at various locations input and process data to effect a transaction, and in this system, digital signatures and encryption are used to keep the transaction secure.

The Examiner, on page 3, line 5 of the Office Action, refers to Leighton, however, it appears that this is, in fact, a reference to Mital. The Examiner argued that Mital discloses a feature that is analogous to the owner appending to the title a public part of a signature scheme of the transferee.

In the present invention, the owner produces a separate message (that is, separate from the title), and includes in this separate message the public key of the transferee, and the owner

signs this message using the owners secret key. This provides the public (which can decrypt the message using the public key of the owner's signature scheme) with assurance that the sale has the approval of the owner. Thus, the owner can provide that assurance without releasing any private information.

The other references of record have been reviewed, and these other references, whether considered individually or in combination, also do not disclose or suggest this feature of the present invention.

For instance, Muftic discloses a network for electronic business transactions. In this network, digital signatures and encryption are also used to maintain the transaction secure

Arbaugh, et al. was cited for its disclosure of a specific cryptographic generator.

Neither Muftic nor Arbaugh, et al, either considered individually or in combination with the other references, discloses or renders obvious the above-discussed message produced and signed by the owner using the owner's secret key.

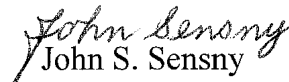
Independent Claims 1, 7 and 13 are being amended to emphasize this aspect of the invention. In particular, each of these claims is being amended to set forth positively the feature that the owner produces a message including the public part of the signature key of the transferee, and the owner signs this message using a secret key of a signature scheme of the owner.

As discussed above, this feature of the invention is of utility because, with it, the owner can provide assurance that the sale has the approval of the owner without releasing any secret or confidential information of the owner. This, in turn, helps potential future buyers determine the legitimacy of ownership of the title.

In light of the above-discussed differences between Claims 1, 7 and 13 and the prior art, and because of the advantages associated with these differences, Claims 1, 7 and 13 patentably distinguish over the prior art and are allowable. Claims 2-6 and 19-23 and 25 are dependent from Claim 1 and are allowable therewith. Similarly, Claims 8-11 are dependent from, and are allowable with, Claim 7; and Claims 15 and 16 are dependent from Claim 13 and are allowable therewith. The Examiner is, accordingly, respectfully asked to reconsider and to withdraw the rejections of Claims 1-11, 13, 15, 16 and 19-23 under 35 U.S.C. §103, and to allow these Claims and new Claim 25.

For the reasons discussed above, the Examiner is asked to reconsider and to withdraw the rejection of Claims 1, 2, 5, 7, 8, 11, 13 and 19-24 under 35 U.S.C. §101 and the rejection of Claims 1-11, 13, 15, 16 and 19-23 under 35 U.S.C. §103, and to allow Claims 1-11, 13, 15, 16 and 19-23 and 25. If the Examiner believes that a telephone conference with Applicants' Attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully Submitted,


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